



Title: Using art to scaffold systems thinking and biomedical career pathways in young learners

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Abstract: A robust science education moves beyond the delivery of facts and enhances a student's understanding of complex systems in the natural world. In science education, art has been used to better engage students in subject matter, but art has not been integrated with science as a strategy to build a student's "systems thinking". In this talk, I will discuss our project "HEAL: Health Education through Arts-Based Learning" which was designed to integrate art and science in educational programming on topics of infectious disease systems. The HEAL program focused on children in 3rd-5th grades from rural, agricultural communities of Washington State. These primarily Latino communities are disproportionately at risk for infectious diseases and the Latino community is underrepresented in the biomedical career sector. In collaboration with teaching professionals, community leaders, and artists, we developed curricula with integrated, complimentary art and science learning objectives. In field tests, we deployed the curricula and evaluated (1) effects on content learning and systems thinking, and (2) the cultivation of interest in biomedical career pathways. I will discuss the development of our curricula and provide examples from our field data to show effects of art-science integration on science learning, systems thinking, and interest in STEM career pathways.

Bio: Dr. Jeb Owen is a faculty member in the Department of Entomology at Washington State University, where his work focuses primarily on the ecology of parasitic diseases. His research has explored the ecological and immunological factors that affect how parasites interact with their hosts. Jeb is also an artist with a longstanding curiosity about the intersection between science and art.